

# Water Quality Monitoring Results for 2006



# Water Quality Monitoring Results for 2006: Presentation Outline

---

- Who monitors?
- Why monitor?
- Results
  - Weather
  - Stream Water Quality
  - Stream Benthic Macroinvertebrates
  - Swimming Beach Water Quality
  - Large Lakes Water Quality
  - Puget Sound Water Quality
- Data Management

# Who Monitors?

---

- WLRD Science Section
  - Mission: *To provide scientific information and analysis to support regional environmental resource management.*
- King County Environmental Laboratory
  - *The Environmental Laboratory (Lab) provides quality field, laboratory, information, and advisory services in support of King County and other publicly-sponsored programs that protect and enhance water quality.*

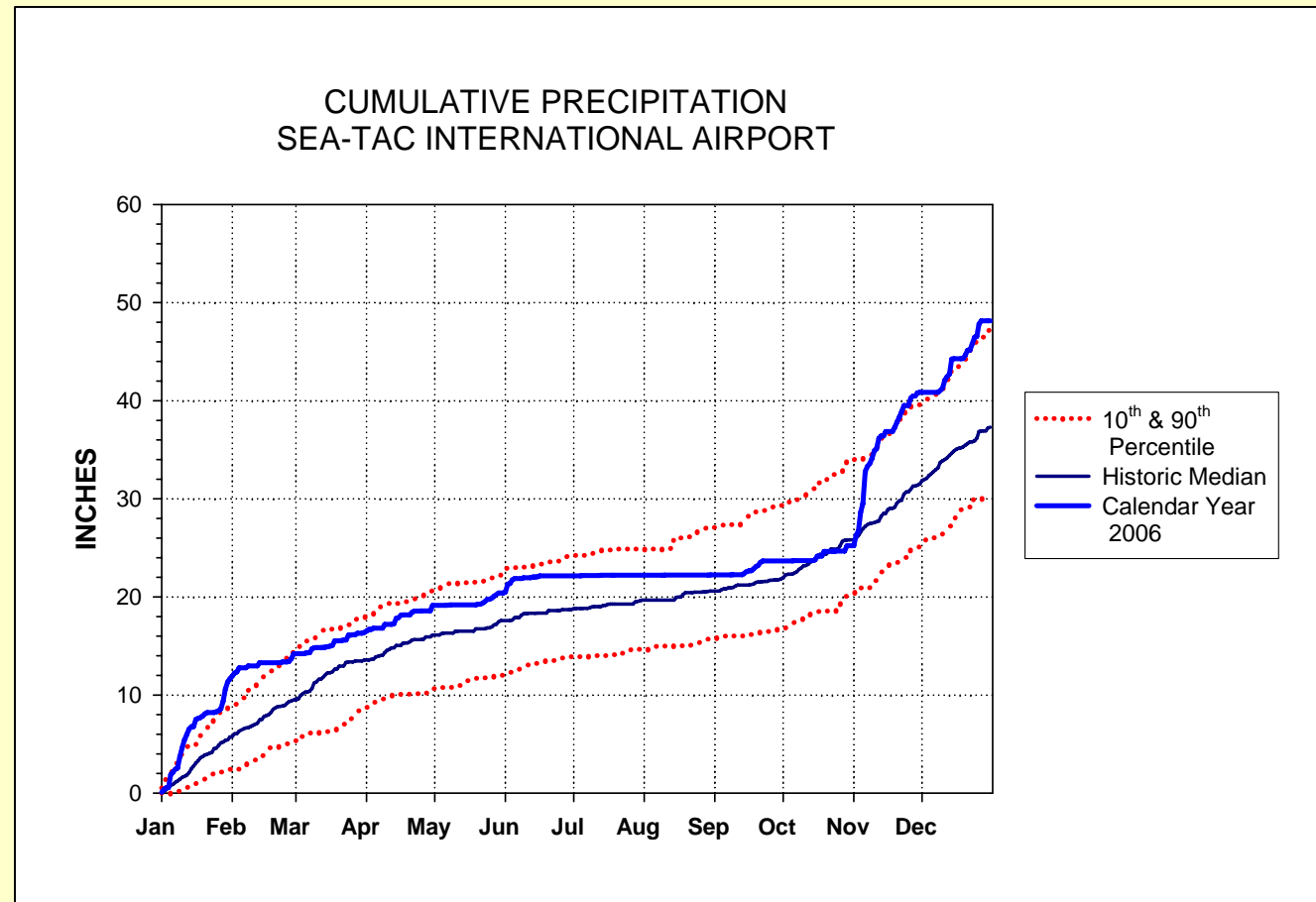
# Why Monitor?

---

- Part of Water Quality Pollution Abatement Plan
  - Support multiple WTD programs and operations
- Protect investments in clean water
- Public health protection
- Track long-term trends
- Data also used for
  - Salmon recovery
  - Clean Water Act compliance
  - Stormwater management
- Participate in cooperative studies with other governmental and research agencies
- To answer tomorrow's questions

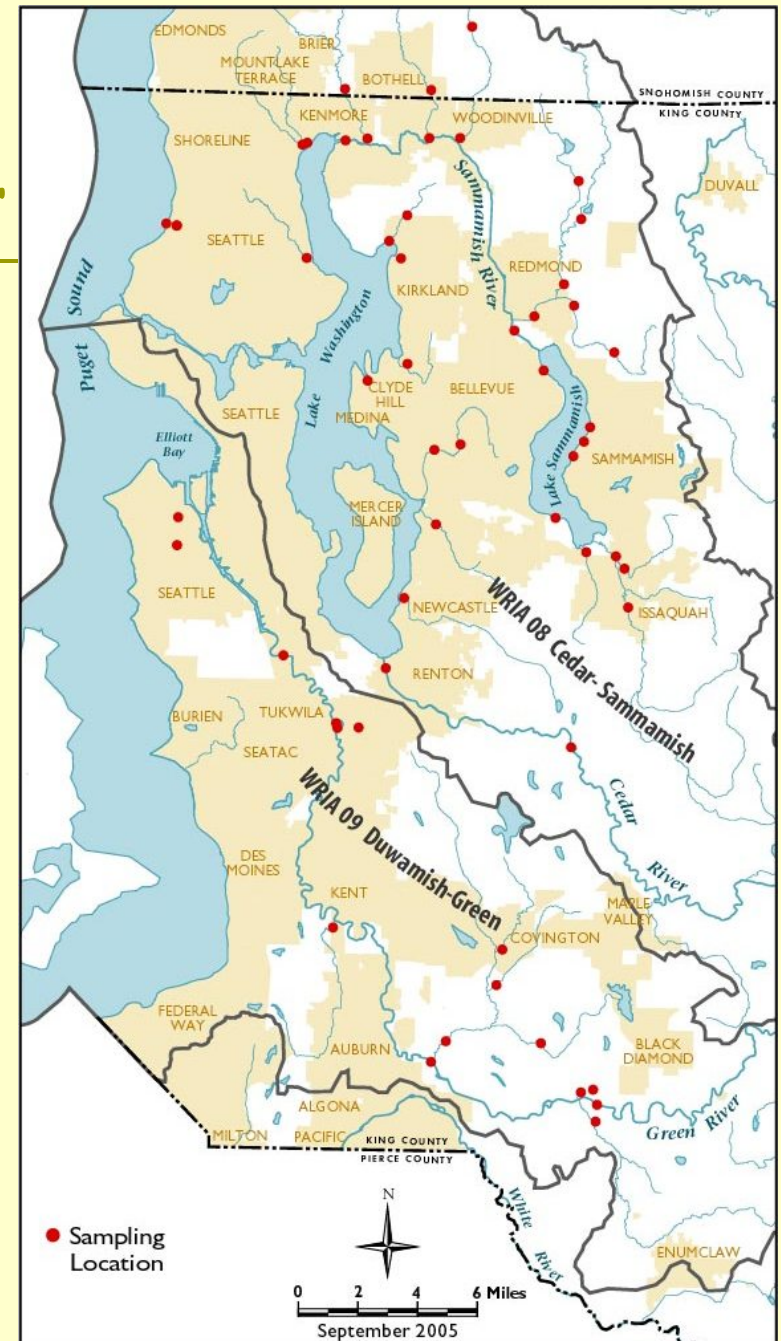
# 2006 Cumulative Precipitation Sea-Tac International Airport

- Second wettest January on record
- Second driest August on record
- November wettest month in history of Seattle



# 2006 Routine Streams Monitoring

- 54 sites sampled monthly
  - Bacteria
  - Temperature
  - Nutrients
  - Oxygen
  - pH
  - Turbidity
  - Quarterly Metals

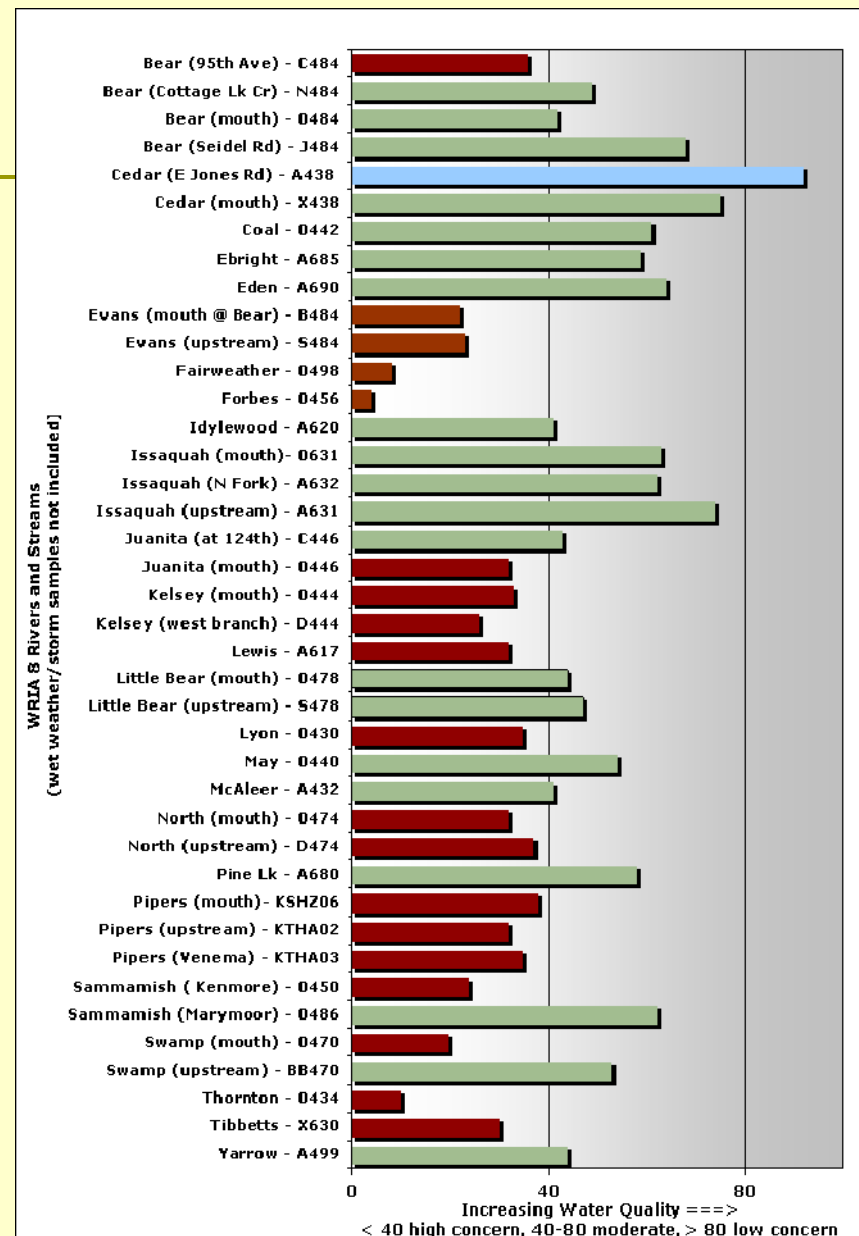
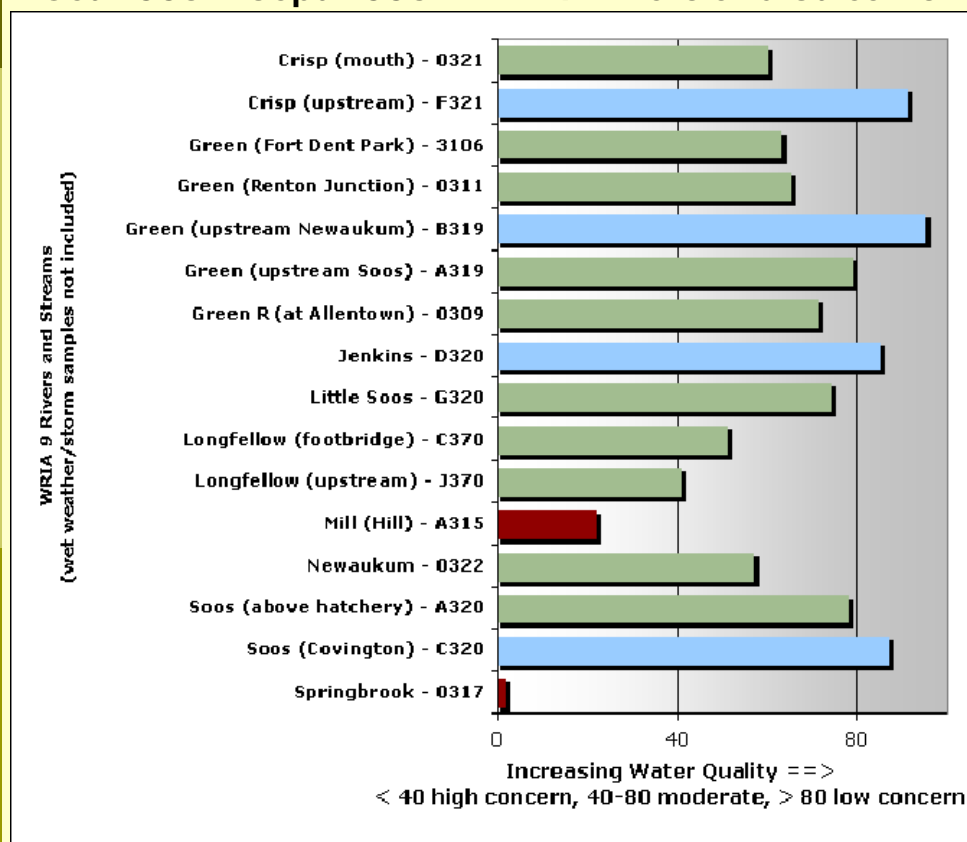




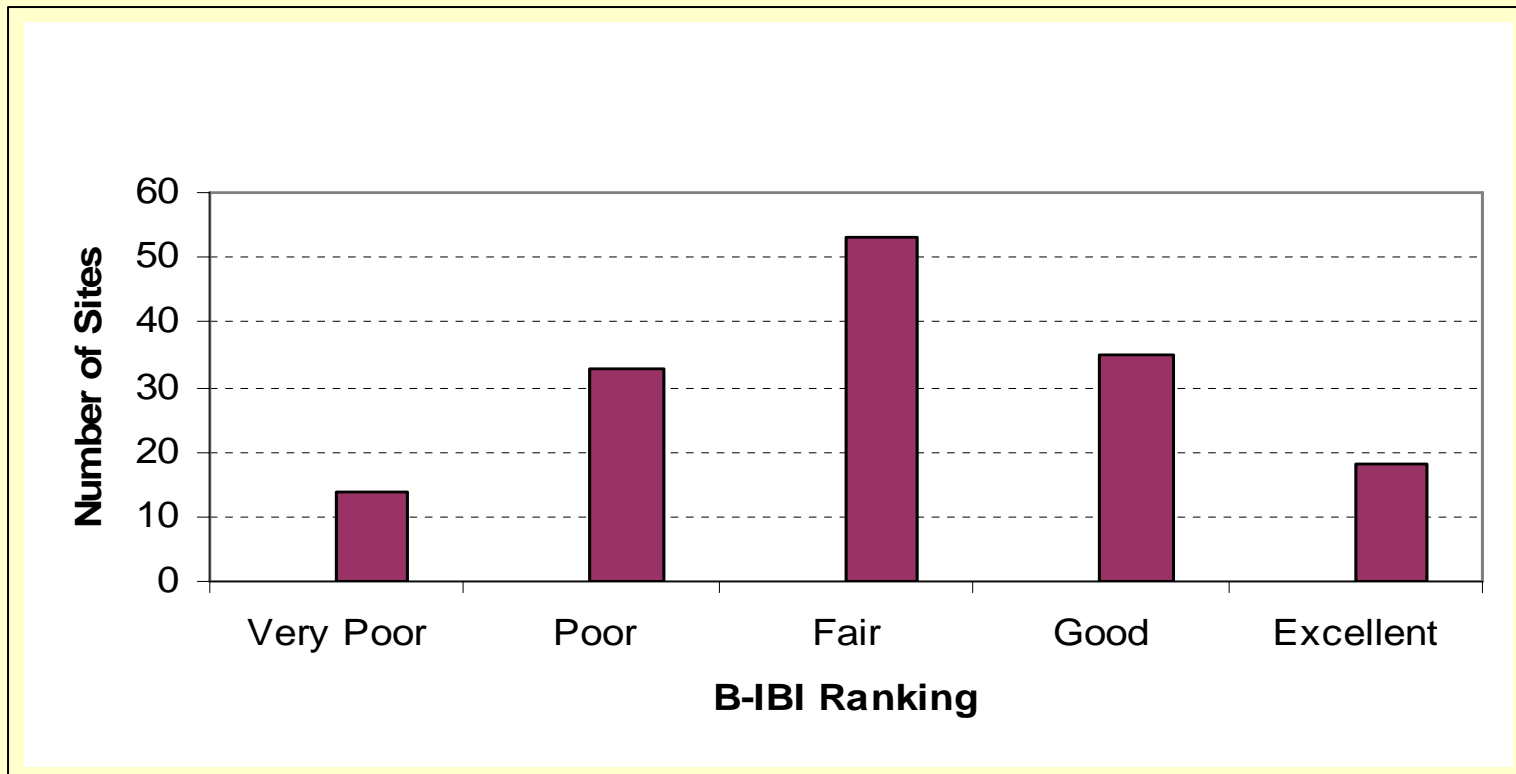
# Water Quality Index by Stream

Oct 2005 – Sept 2006 WRIA 8 Rivers and Streams

Oct 2005 – Sept 2006 WRIA 9 Rivers and Streams



# 2006 Stream Benthic Macroinvertebrate Scores (B-IBI)

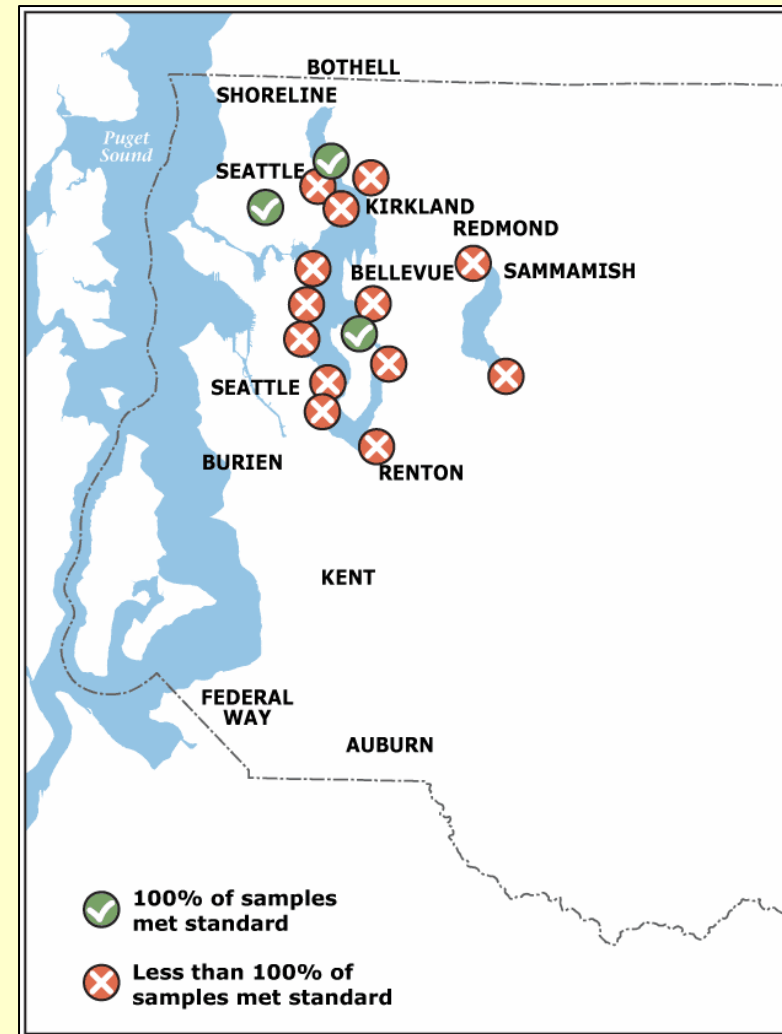


- Greater Lake Washington and Green River watersheds
- Indicator of overall stream health



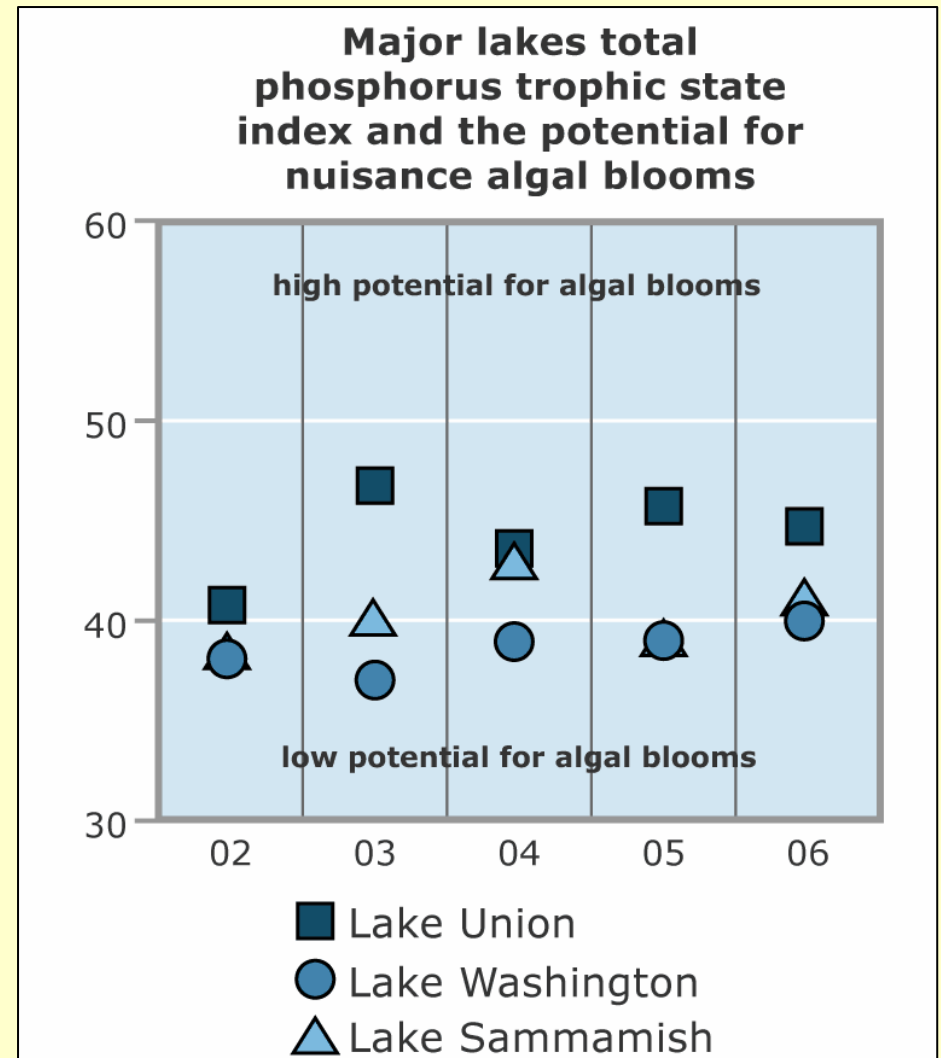
# 2006 Swimming Beach Results

- Beaches sampled weekly during summer for fecal bacteria
- Green Lake and Lakes Washington and Sammamish
- Coordinated effort between DNRP and SKCPH
- Cost-share with jurisdictions
- No beach closures in 2006



# 2006 Major Lake Water Quality

- 25 sites sampled in Lakes Sammamish, Washington and Union
- The Trophic State Index assesses the level of biological activity based on phosphorus levels.

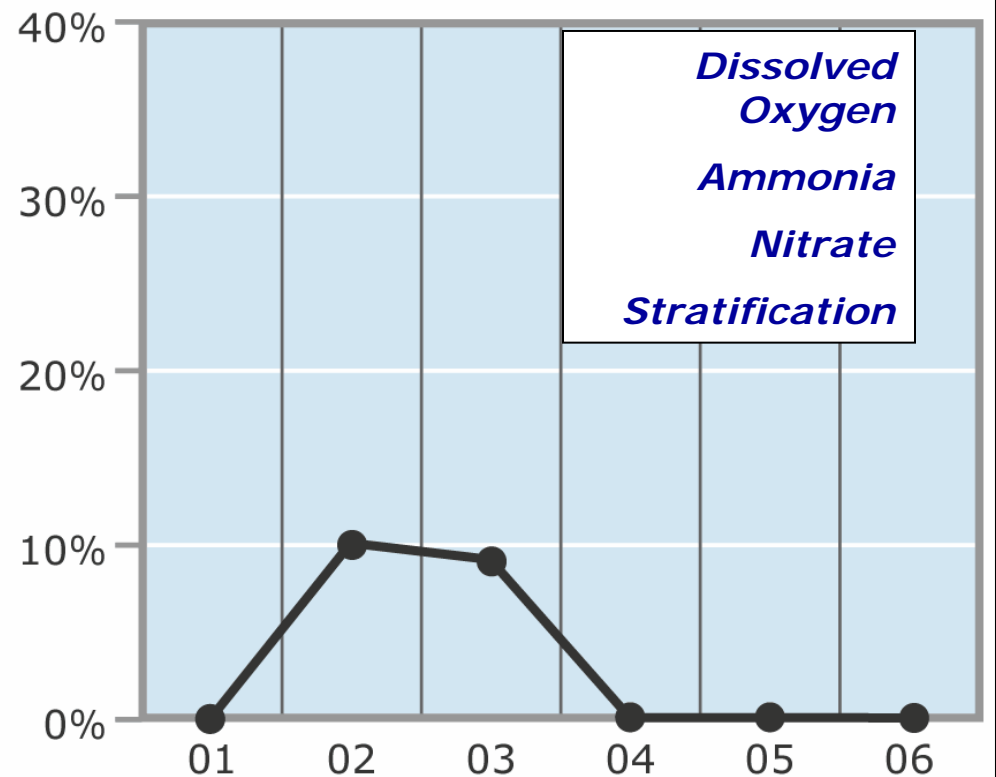


# 2006 Marine Offshore Water Quality

## 13 Offshore Sites

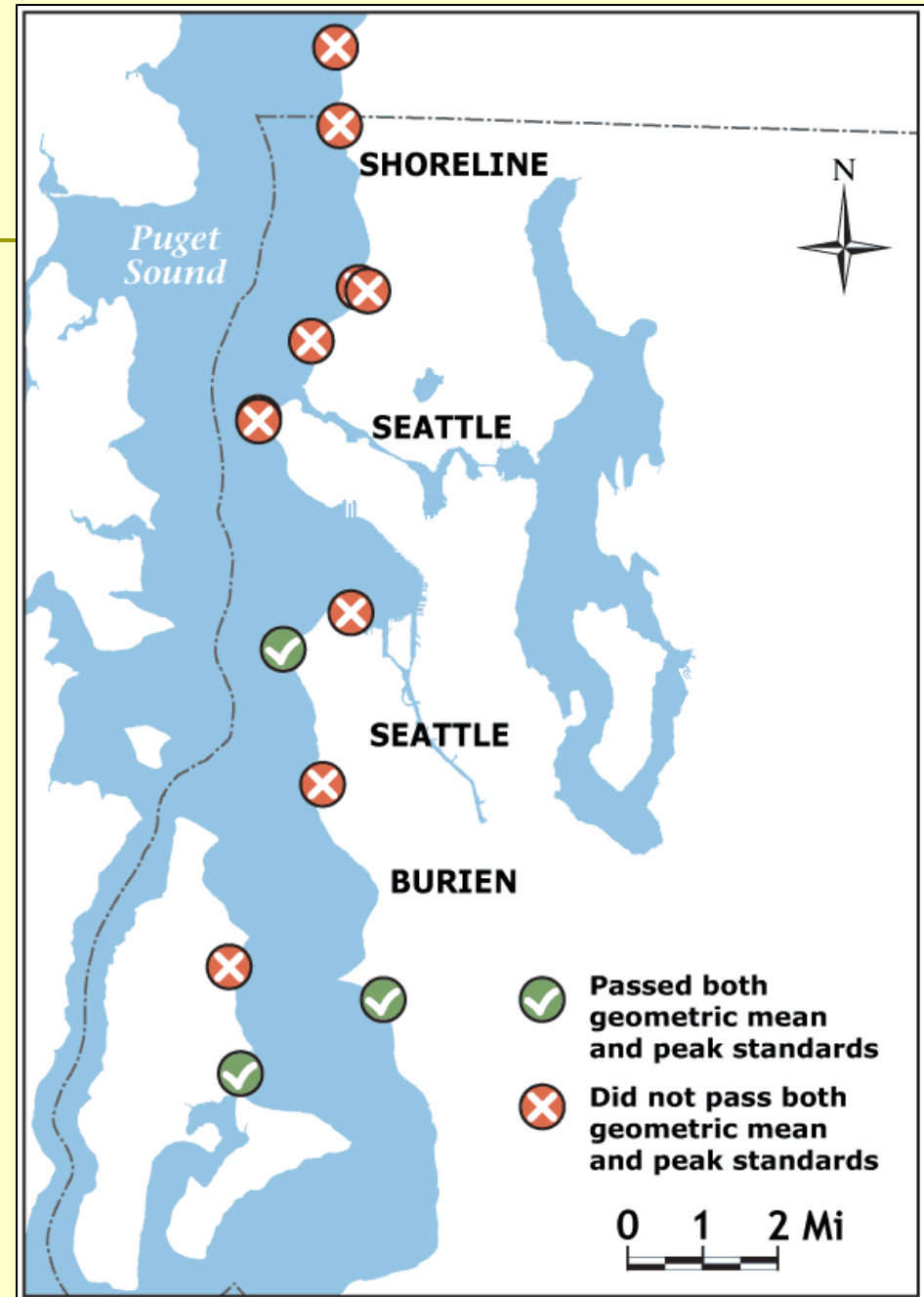


## Percent Marine Offshore Monitoring Sites at Moderate or High Water Quality Concern Levels



# 2006 Marine Beach Bacteria Monitoring

- 13 sites sampled monthly
- 3 sites always met standards
- 10 sites violated standards one or more times.



# Data Management

---

- Major Upgrades to data management systems
  - Hydrologic Information Center (HIC)
  - Multi-jurisdictional Benthic Macroinvertebrate Database (King County, Snohomish County, Pierce County, City of Seattle)
- Data available via the internet
  - Stream flow
  - Stream water quality
  - Major Lakes water quality
  - Small Lakes water quality
  - Swimming Beaches water quality
  - Puget Sound water quality

# Monitoring Information

---

- Stream Flow Monitoring website
  - <http://dnr.metrokc.gov/wlr/waterres/hydrology/>
- Streams Monitoring website
  - <http://dnr.metrokc.gov/wlr/waterres/streamsdata/>
- Major Lakes Monitoring website
  - <http://dnr.metrokc.gov/wlr/waterres/lakes/index.htm>
- Small Lakes Monitoring website
  - <http://dnr.metrokc.gov/wlr/waterres/smlakes/>
- Swimming Beach website
  - <http://dnr.metrokc.gov/wlr/waterres/swimbeach/default.aspx>
- Marine Monitoring website
  - <http://dnr.metrokc.gov/wlr/waterres/marine/>

